^{16}O(d,p),(d,pγ) 1990Pi05,1957Br82

1952Th24: ^{16}O(d,p), E=1-2 MeV; the γ-ray energies and intensities are determined from the photoelectric and Compton conversion processes.

1953Th14: ^{16}O(d,p), lifetime Measurements for the first excited states of ^{17}O.

1954Sp01: ^{16}O(d,p), E=5-8.5 MeV; ^{17}O levels were identified.

1955Gr68: ^{16}O(d,p), E=1.1-2.4 MeV; measured reaction products, Ep, Ip; deduced $\sigma(\theta)$.

1955Kh35: ^{16}O(d,p), investigation of the energy levels of the light nuclei by magnetic analysis.

1956Gr37: ^{16}O(d,p), E=9 MeV; angular distributions have been measured.

1957Br82: Excitation energies and widths of ^{17}O were measured from E_d=6.5-7.5 MeV bombardment of thin targets of solid oxide on Formvar backings (either metallic Li or iron was evaporated and then oxidized or SiO_2 was evaporated directly) at θ=30°, 60°, 70°, and 90° with respect to the incoming beam. Outgoing particles were identified based on the observed change in energy of the emitted particles with a change in bombarding energy or observation angle and a comparison of the spectra from the different target materials. The 0.87-MeV level was found to be single rather than double as recently suggested. Disagreements among other experiments concerning the ^{17}O levels were also explained in terms of the large difference in level widths.

1959Lo59: Important differences from results predictd by Butler theory have been observed in angular distribution of the ^{16}O(d,p) reaction, specially when the incident deuteron energy is near 1.7 MeV.

1960Al35: ^{17}O; measured not abstracted; deduced nuclear properties.

1960Go20: ^{17}O; measured not abstracted; deduced nuclear properties.

1961Ke01: The reactions ^{16}O(d,p)^{17}O and ^{16}O(d,t)^{15}O were studied by bombarding thin nickel oxide foils with 15-Mev deuterons from the University of Pittsburgh cyclotron. The emitted particles were magnetically analyzed and detected either by nuclear emulsions or by a CsI(Tl) scintillator. Absolute cross sections and angular distributions were measured for the first 6 states of ^{17}O and for the $^{15}O_{g.s.}$ state. Reduced width values Θ^2 were extracted. The experimental results indicated that 3.846-MeV state was not a $1f_{7/2}$ single-particle state, the $2p_{3/2}$ single-particle component was fragmented over more than two states, and 3.058-MeV state contained a $2p_{1/2}$ single-particle component.

1963Ya03: The experiment was carried out in Tokyo/the INS 160 cm cyclotron from E_d=14.95 MeV bombardment of an enriched tungsten oxide target (90%^{18}O, 1.1%^{17}O, 8.9%^{16}O) with thickness of 0.28 mg/cm^2. Emitted protons were detected and analyzed by a broad range magnetic spectrograph with four nuclear emulsion plates (Sakura NR-MI, 50μm). Absolute cross sections were measured and angular distributions (measured at 14 angles in θ_{lab}=13°−140°) were analyzed to determine reduced withds (θ^2) using the Butler-Born theory. Parameters of energy levels of ^{17}O*(0, 0.871, 3.058, 3.846, 4.555, 5.083, 5.378, 5.697 MeV were extracted.

1964Ki05: ^{16}O(d,p), E=786 keV-1.7 MeV; measured σ(E,θ) for p_0, p_1.

1964Sc12: Absolute total cross sections of the reaction ^{16}O(d,p) were determined from the protons angular distributions measurement at θ=10°−165° with E_d=11.8 MeV. Reduced widths were calculated for the levels of ^{17}O*(0, 0.87, 3.06, 3.85 MeV).

1965Mo16: ^{16}O(d,p), E=5.56 MeV; measured σ(Ep,θ), Q. ^{17}O deduced levels. Enriched targets.

1966Ga09: ^{16}O(d,p), E=1.3, 4 MeV; measured σ(Ep,θ). ^{17}O deduced S.

1966Wi01: The energy of the ^{17}O 0.871-MeV γ-ray was measured with a lithium-drifted germanium detector using the ^{16}O(d,p)^{17}O reaction to populate the first excited state of ^{17}O. A result of 870.81 keV *22* was obtained using various radiactive sources for energy calibration.

1967Al06: ^{16}O(d,p), E=10-13 MeV; measured σ(E;Ep,θ). ^{17}O levels deduced S. Enriched ^{17}O target.

1968Di06: ^{16}O(d,p), E=2-3.5 MeV; measured σ(E;θ).

1968Ho23: ^{16}O(d,p), E=14.3 MeV; measured σ(Ep,θ); deduced reaction mechanism. Si detector, magnetic spectrograph.

1968Na06: ^{16}O(d,p), E_d=6.0-11.0 MeV; measured σ(E;Ep,θ). ^{17}O levels deduced S. Natural target.

1969Co12: ^{16}O(d,p), E=4.4-8.4 MeV; measured tensor polarization (θ), σ(E,θ). Natural target.

1969Du11: ^{16}O(d,p), E=0.35-1.05 MeV; measured σ(E;Ep,θ).

1969Go04: ^{16}O(d,p), E=1.2 MeV; measured pγ-delay. ^{17}O levels deduced $T_{1/2}$. Natural, enriched targets.

1970Da14: ^{16}O(d,p), E=4-6 MeV; measured σ(E;θ); deduced optical model parameters. ^{17}O levels deduced S.

1971Br44: ^{16}O(d,p), E=12.3 MeV; measured tensor analyzing power(θ).

1971Do13: ^{16}O(d,pγ), E=2,2.25,4.2 MeV; measured Doppler shift attenuation. ^{17}O levels deduced $T_{1/2}$.

1971Ko21: ^{16}O(pol. d,p), E_d=8 MeV; measured polarization parameters iT_{11}(Ed;Ep,θ), cross sections σ(Ed;Ep,θ); deduced J-dependence. ^{17}O deduced S. Natural targets.

1972Br12: ^{16}O(pol. d,p), E_d=12.3 MeV; measured vector analyzing power iT_{11}(θ,Ep). Natural O target.

1972Co15: ^{16}O(pol. d,p); measured cross section $\sigma(E_d,\theta)$, polarization parameters i$T_{11}(E_d,\theta)$, $T_{20}(E_d,\theta)$, $T_{21}(E_d,\theta)$, $T_{22}(E_d,\theta)$; E_d=9.3, 13.3 MeV. Cross sections and vector and tensor analysing powers have been measured for ^{16}O(d,$p_{0,1}$)17O*. Natural targets.

^{16}O(d,p),(d,pγ) 1990Pi05,1957Br82 (continued)

1972CoZE: ^{16}O(d,d),(d,p), E=25.4,36,63 MeV; measured $\sigma(\theta)$; deduced optical model parameters. ^{17}O deduced levels, S, Γ.
1972Sl10: ^{16}O(pol. d,p), E=2-3 MeV; measured vector analyzing power(E;θ).
1973Ca30: ^{16}O(d,p), E=0.98-1.97 MeV; measured σ(E;Ep,θ). ^{17}O levels deduced S.
1973Da17: ^{16}O(pol. d,p), E=9.3,13.3,15.0 MeV; measured polarization parameters iT_{11}(Ed,Ep,θ), cross sections σ(Ed,Ep,θ). ^{17}O deduced S, resonance widths. Natural targets.
1973Jo10: ^{16}O(pol. d,p), E=12.3 MeV; measured analyzing powers i$T_{11}(\theta)$, $T_{20}(\theta)$, $T_{22}(\theta)$, deduced importance of d-state effects using DWBA theory. ^{17}O deduced level J.
1974Co04: Deuteron beams at E=25.4, 36.0, and 63.2 MeV from the University of Maryland Cyclotron impinged on an ^{16}O gas target with pressure ≈1 atm. The ^{16}O gas temperature and pressure were monitored with an accuracy better than 0.2°C and 0.1 mm Hg respectively. The outgoing particles were detected with solid state detector ΔE-E telescopes with the energy resolution was ≈100 keV. Coincident ΔE and E signals were sent to 8192 channel ADC units interfaced with the computer and particles were identified. Optical potential parameters of levels of ^{17}O*(0, 0.87, 5.08 MeV) were deduced.
1979An15: ^{16}O(d,p), E=12 MeV; measured $\sigma(\theta)$. ^{17}O level deduced Γ_n. DWBA calculations for unbound states.
1980Da26: ^{16}O(d,p), E=0.97 MeV; measured σ.
1980Wa24: ^{16}O(d,pγ), E_d=2.51 MeV; measured $E_\gamma(1/2^+ \to 5/2^+)$.
1981Bo03: ^{16}O(d,p), E=698 MeV; measured $\sigma(\theta)$; deduced deuteron optical model parameters. DWBA, rescattering calculations.
1982Be64: ^{16}O(d,p), E=545.1-658.2 keV; measured products, ^{17}O, E_n, I_n; deduced $\sigma(\theta)$.
1985RoZV: ^{16}O(d,p),(pol. d,p), E=15,17 MeV; measured $\sigma(\theta)$, vector analyzing power vs θ. ^{17}O levels deduced excitation mechanism.
1990Ca32: ^{16}O(d,p), E≤1200 keV; measured γ-spectra, pγ-coin. High sensitivity analysis, other targets, data input.
1990Pi05: ^{16}O(d,p), E=12.3 MeV; measured Q, $\sigma(\theta)$. ^{17}O deduced levels. Natural targets.
1991Le36: ^{16}O(d,p), E=735 keV-1.1 MeV; deduced $\sigma(\theta)$.
1992La08: ^{16}O(d,p), E=650 keV; measured particle spectra. Rutherford backscattering spectroscopy, NRA, laser irradiated borosilicate glass surface examination.
1992Ma47: ^{16}O(d,p), E=1.4 MeV; measured yield; deduced GaAs crystal surface modifications during annealing.
1993Qu04: ^{16}O(d,p), E=857 keV; measured $\sigma(\theta)$.
1994Iv01: ^{16}O(d,p), E=1.437 MeV; measured emergent particle energy before, after Al foil absorption.
1994Le19: ^{16}O(d,p), E=825 keV; measured particle spectra, yield.
1995Ro28: ^{16}O(d,pγ), E=0.4-1.8 MeV; measured σ(E). ^{16}O(d,pγ), E=1.8 MeV; measured Eγ, Iγ. Ultrathin dielectric films with ion beams.
2000El08: ^{16}O(d,p), E=0.7-3.4 MeV; measured Eγ, Iγ; deduced thick target γ-ray yields.
2002Ku35: ^{16}O(d,p), E=400keV; measured proton spectra, angular distributions.
2003Ji11: ^{16}O(d,p), E=701 keV-3 MeV; measured products, deduced $\sigma(\theta)$.
2004Gu23: ^{16}O(d,p), E=700 keV-2.1 MeV; measured products, deduced $\sigma(\theta)$.
2006Sz07: ^{16}O(d,pγ), E=0.6-2 MeV; measured Eγ, Iγ; deduced γ-ray production σ, thin target yields.
2016Cs02: ^{16}O(d,pγ), E=0.7-3.4 MeV; measured reaction products, Eγ, Iγ; deduced $\sigma(\theta)$, thick target yields for γ-ray of a particular energy.
2016Ra06: ^{16}O(d,p), E=0.7-1.8 MeV; measured reaction products, Ep, Ip; deduced $\sigma(\theta)$. Comparison with available data.
2019Ma31: ^{16}O(d,p), E=15 MeV; measure the angular distribution, deduced the spectroscopic factor (SF) and the asymptotic normalization coefficient (ANC) for the 17O ground state.
See also (2009Ts01,2014Jo02: theory).

Theory:
1961Bu16: ^{16}O(d,p), the analysis of (d,p) stripping reactions (DWBA).
1961Ja23: the systematic study of Q-value measurements for accurate mass/excitation states determination.
1962Ga16: Analysis of delayed coincidence lifetime measurements.
1963Sm05: Distorted-wave calculations of light nuclei (d,p) angular distributions.
1967Sc16: The influence of the non-locality in zero-range DWBA calculations of the ^{16}O(d,p)^{17}O and ^{18}O(p,p′) reactions is investigated.
1969Ic02: ^{16}O(d,p), E=10.5 MeV; calculated Q, S-matrix elements.
1970Bu16: ^{16}O(d,p), E not given; calculated $\sigma(\theta)$. DWBA.
1970Do10: ^{16}O(d,p), E=12,15,26 MeV; analyzed $\sigma(\theta)$. ^{17}O levels deduced S. Absorption model.
1970Ki15: ^{16}O(d,p), E=12-26 MeV; analyzed $\sigma(\theta)$. ^{17}O levels deduced S.

^{16}O(d,p),(d,pγ) 1990Pi05,1957Br82 (continued)

1970Oh06: ^{16}O(d,p), E=12 MeV; calculated $\sigma(\theta)$. Coupled channel theory.
1970Pe14: ^{16}O(d,p), E=7-15 MeV; analyzed $\sigma(\theta)$, P(θ), vector analyzing power(θ). ^{17}O levels deduced S.
1970Vi03: ^{16}O(d,p), E=12 MeV; calculated $\sigma(\theta)$.
1971Bo50: ^{16}O(d,p), E=26, 28 MeV; calculated $\sigma(\theta)$, peripheral model (PM), DWBA.
1972Bu23: Verification of Distorted Wave Method for Stripping Reactions to Resonant State.
1972Dz06: Peripheral Model for a Stripping Reaction to a Resonant State.
1972Go04: Effects of Non-Orthogonality and Virtual Excitations in Direct Reactions (I).
1972Ph06: ^{16}O(d,p), E=14.3 MeV; calculated $\sigma(\theta)$.
1972Sc20: ^{16}O(d,p), E=12 MeV; calculated $\sigma(\theta)$, σ for bound, unbound states. DWBA.
1972Sc45: ^{16}O(d,p), E=12 MeV; calculated $\sigma(\theta)$.
1972Sh17: ^{16}O(d,p), E=12 MeV; analyzed $\sigma(\theta)$. Diffraction model, unbound states.
1973Ba74: ^{16}O(d,p), calculated $\sigma(\theta)$.
1973Cl09: ^{16}O(d,p), calculated S.
1973Do02: ^{16}O(d,p), E not given; analyzed $\sigma(\theta)$. ^{17}O deduced levels, J, π, level-width.
1973Me18: ^{16}O(d,p), E=12.3 MeV; calculated $T_{20}(\theta)$.
1973Wi05: ^{16}O(d,p), E=11.0 MeV; deduced S.
1974Ba19: ^{16}O(d,p), calculated $\sigma(\theta)$.
1974Co10: Spectroscopic factor for the 5.08-MeV state of ^{17}O was discussed in the ^{16}O(d,p) and ^{16}O(n,n) reactions.
1974Fo17: ^{16}O(d,p), E=12 MeV; calculated σ(Ep,θ), σ. ^{17}O resonance deduced n-width.
1974Go02: The DWBA ^{16}O(d,p) reaction cross sections.
1974Im01: ^{16}O(d,p), E=10.5 MeV; calculated σ(Ep,θ), $\sigma(\theta)$.
1975Co12: ^{16}O(d,p), E=10.5 MeV; calculated σ(Ep,θ).
1976Bo15: ^{16}O(d,p), E=13.3 MeV; calculated σ. Singularity subtraction method.
1976Bo48: ^{16}O(pol. d,p), E<4 MeV; analyzed vector analyzing power.
1976Co29: ^{16}O(d,p), E=10.49,14.8,20 MeV; calculated $\sigma(\theta)$. Folded-potential DWBA plus multistep contribution of rearranged intermediate channels, corrected for nonorthogonality. Surface approximation with separable Green function.
1976Sa04: ^{16}O(pol. d,p), E=6-13.3 MeV; calculated A(θ). Surface reaction model.
1976Sh13: ^{16}O(d,p), E=6-15 MeV; calculated $\sigma(\theta)$.
1977Gr20: ^{16}O(d,p), E=10.5 MeV; calculated σ(Ep,θ).
1977Mu04: ^{16}O(d,p), E=12-13.3 MeV; calculated σ(E). DWBA analysis.
1979Gr11: ^{16}O(d,p), E=10.49 MeV; calculated $\sigma(\theta)$. Channel coupling array theory.
1980Am02: ^{16}O(d,p), E=36 MeV; calculated $\sigma(\theta)$. DWBA, three-body model of inelastic scattering.
1980Ay01: ^{16}O(d,p), E=20, 45 MeV; ^{16}O(pol. d, p), E=20 MeV; calculated $\sigma(\theta)$, vector, tensor analyzing power vs θ. Three-body calculations, no Coulomb effects, separable interactions.
1980ChZJ: ^{16}O(d,p), E=5 MeV; calculated three-body $\sigma(\theta)$. ^{17}O level deduced S. Two-dimensional coupled integral equations, product integration method.
1980Kr18: ^{16}O(d,p), E=12 MeV; calculated $\sigma(\theta)$. Stripping to unbound states, resonant state theory, coupling constant analytic continuation.
1982Sh06: ^{16}O(d,p), E=400,660 MeV; calculated $\sigma(\theta)$. Eikonal model.
1982Th02: ^{16}O(d,p), E=10.49 MeV; calculated $\sigma(\theta)$. Coupled-channels method, Pauli, non-orthogonality effects.
1982Th06: ^{16}O(d,p), E=10.49 MeV; calculated channel nonorthogonality effects.
1983Ic01: ^{16}O(d,p), E=10.5 MeV; calculated $\sigma(\theta)$; deduced potential parameters. DWBA, bare potentials.
1983Sh15: ^{16}O(d,p), E=8 MeV; calculated $\sigma(\theta)$. DWBA, center-of-mass corrected shell model form factor.
1985JoZZ: ^{16}O(d,p), E=0.8-2 MeV; analyzed $\sigma(\theta)$.
1987Ro20: ^{16}O(d,p), E=25.2 MeV; calculated $\sigma(\theta)$; deduced model parameters. ^{17}O levels deduced spectroscopic factors. Deuteron breakup model.
1989Gu23: ^{16}O(d,p), E not given; calculated $\sigma(\theta)$; deduced reaction mechanism. Coupled-channels method, zero-range interactions.
1989Lu03: ^{16}O(d,p), E=10.5,24.89 MeV; calculated $\sigma(\theta)$. Bare potential DWBA.
1991Ma36: ^{16}O(d,p), E=13.5 MeV; calculated $\sigma(\theta)$. Three-body formalism, bound state approximation, unitarity.
1992MaZM: ^{16}O(d,p), E not given; calculated $\sigma(\theta)$. Three-body approach to transfer reactions.
1993Gu04: ^{16}O(pol. d,p), E=2.864-9.3 MeV; analyzed $\sigma(\theta)$, i$T_{11}(\theta)$. Coupled-channels method, stripping as multi-nucleon exchange.

^{16}O(d,p),(d,pγ) 1990Pi05,1957Br82 (continued)

1995Bu10: ^{16}O(d,p), E=6.26 MeV; calculated $\sigma(\theta)$. Three-body Faddeev calculations.
1996Gu23: ^{16}O(pol. d,p), E≤10 MeV; analyzed tensor polarization data; deduced multi-nucleon exchange role in stripping. Coupled-channels approach.
1996Ma36: ^{16}O(d,p), E=5.03,12 MeV; calculated $\sigma(\theta)$; deduced two-body interaction separability features. Transfer reactions, three-body theory, channel spins.
1999Le04: ^{16}O(d,p), E=8 MeV; analyzed $\sigma(\theta)$; deduced parameters. ^{17}O deduced radii, halo features.
1999Ti04: ^{16}O(d,p), E=36, 63.2 MeV; calculated $\sigma(\theta)$; deduced recoil excitation, breakup effects.
2004As11: ^{16}O(d,p), E=2.29-3.27 MeV; calculated σ(E,θ); deduced strong polarization effect. Coupled channels approach, comparisons with data.
2007AsZY: ^{16}O(d,p), E=2.279-3.186 MeV; calculated transfer reaction cross sections and spectroscopic factors using coupled reaction channel formalism.
2007AsZZ: ^{16}O(d,p), E=2.29-3.27 MeV; calculated spectroscopic factors and cross sections using coupled reaction channel method.
2007Gu18: ^{16}O(d,p), E not given; analyzed angular distributions to extract ANCs using DWBA and adiabatic wave approximation.
2007Pa10: ^{16}O(d,p), E=15 MeV; analyzed $\sigma(\theta)$; deduced spectroscopic factors, asymptotic normalization coefficients.
2009De02: ^{16}O(d,p), E=25.4,36.0,63.2 MeV; calculated $\sigma(\theta)$, binding energies. Momentum-space three-body Fadeev-like equations. Comparison with experimental data.
2009De07: ^{16}O(d,p), E=25.4,36 MeV; calculated differential cross sections, analyzing powers for polarized beam using local and nonlocal optical potentials parameters in the framework of Faddeev type scattering equations. Comparison with experimental data.
2010De41: ^{16}O(d,p), E=25.4,36.0 MeV; calculated $\sigma(\theta)$. Exact Faddeev/AGS equations with different NN potentials. Compared to data.
2013Ti04: ^{16}O(d,p), E=9-15 MeV; calculated $\sigma(\theta)$, Perey factor, local potential. Calculated β_n coefficients, moments and effective nonlocality range in A=16, 40, 208 mass range. Effect on spectroscopic factors and ANCs. ADWA theory with nonlocality of nucleon optical potential included in a consistent way together with the deuteron breakup. Deviation from E(d)/2 rule on theoretical cross sections.
2014Mu10: ^{16}O(d,p), E=36 MeV; calculated differential $\sigma(\theta)$, spectroscopic factors, neutron widths for deuteron stripping reactions to bound and resonant states. Distorted-wave Born approximation (DWBA), continuum-discretized coupled channels (CDCC), and surface-integral formalism.
2015De38: ^{16}O(d,p), E=7.7,11,12,13.3 MeV; calculated differential $\sigma(\theta)$. Faddeev-Alt-Grassberger-Sandhas (AGS) formalism with three-body model (proton+neutron+nuclear core) for proton-transfer reactions, and realistic CD Bonn potential. Comparison with experimental data.
2016De31: ^{16}O(pol. d,p), E=36,63.2 MeV; calculated differential $\sigma(\theta)$ and Ay(θ) analyzing powers with a a number of angular-momentum and parity-dependent optical potentials, and using three-body Faddeev-type equations. Comparison with experimental data.
2016Ti02: ^{16}O(d,p), E=10,20,50 MeV; calculated $\sigma(\theta)$ using local and nonlocal potentials. Comparison of $\sigma(\theta)$ with distorted wave Born approximation (DWBA) and adiabatic distorted wave approximation (ADWA) calculations. Effect of nonlocality on (d, p) transfer cross sections and spectroscopic factors. Comparison of theoretical $\sigma(\theta)$ distributions with experimental data.
2017De20: ^{16}O(d,p), E=12 MeV; calculated $\sigma(\theta)$ using Faddeev-Yakubovsky or equivalent Alt-Grassberger-Sandhas integral equations in momentum space.
2018Li56: ^{16}O(d,p), E=10,20,50 MeV; calculated differential σ(E,θ), σ(E), relative contributions of the different neutron-target orbital angular momenta, neutron-target wave functions, and imaginary part of the potentials using both local and non-local potentials. R-matrix method to solve the nonlocal equations. Comparison with previous theoretical predictions. Relevance to surrogate method for (n,γ) reactions.
2019Sh35: ^{16}O(d,p), E=25, 36 MeV; calculated differential σ(E,θ), R-matrix method in DWBA.
2020Vi06: ^{16}O(d,p), E=3.4-25.9 MeV; calculated differential σ(E,θ), deduced spectroscopic factors.

^{16}O(d,p),(d,pγ) 1990Pi05,1957Br82 (continued)

^{17}O Levels

Note:
^{16}O(d,p) E_d=7.9 MeV (Bu51): Proc. Roy. Soc. A209, 478 (1951).
Angular distributions of the protons or the cross sections for the ^{16}O(d,p) reaction to many ^{17}O states have been studied for E_d=0.3-63.2, 698 MeV ((1959Ha29, 1961Ha19, 1961Ke01, 1962Ma25, 1963Al04, 1963Ya03, 1964Ki05, 1964Sc12, 1965Lo02, 1965Mo16, 1966Al09, 1966Ga09, 1966Sc09, 1967Al06, 1968Di06, 1968Ho23, 1968Na06, 1969Th04, 1970Da14, 1971Ko21, 1972Br12, 1972Co15, 1973Ca30, 1973Da17, 1974Co04, 1981Bo03, 1982Be64, 1985RoZV, 1990Pi05, 1993Qu04, 2002Ku35, 2003Ji11, 2004Gu23, 2016Ra06).
For energy levels observed see also (1955Kh35, 1956Gr37, 1961Ke02, 1963Ya03, 1964Sc12, 1970Da14, 1972Co15, 1973Da17, 1974Co04).
Others: (1973Jo10, 1990Ca32, 1992La08, 1992Ma47). See also (1961Ba10, 1991Pi09: ^{16}O(t,d_0)).

E(level)[†]	J^π[@]	$T_{1/2}$ or Γ[‡]	L[@]	S	Comments
0	5/2$^+$		2	0.84 *4*	S: from (2019Ma31). See also $S_{average}$=0.81 (1970Da14), 0.925 (1972Co15), 0.95 (1974Co04) and S=0.94 *13* (2005Ts03: analysis). ANC=0.60 fm^{-1} *4* (2019Ma31), see also (2007Pa10: 0.67 fm^{-1} *5*).
870.749 *20*	1/2$^+$	180.4 ps *20*	0	≈0.99[&]	E(level): From E_γ=870.725 *20* (1980Wa24). See also E_x(keV)=870.73 *10* (2015Pa05), 870 *20* (Bu51), 875 *12* (1954Sp01), 871 *4* (1957Br82). $T_{1/2}$: from τ_m=260.2 ps *29* which is the weighted average of (1960Ka10: 255 ps *13*), (1963Lo03: 263 ps *8*), (1964Be15: 258.7 ps *42*), (1965Mc10: 263 ps *7*), (1969Go04: 261 ps *7*). Other values(ps): 250 *100* (1953Th14), 233 *26* (1965Al14), 232 *8* (1967Bi05), 253 6 (1969Ni09: ^{9}Be(^{16}O,^{17}O)^{8}Be), 421 *21* (1962Ga15,1962Ga16), 258.7 (1971Do13).
3054.98 *20*	1/2$^-$	<8 keV	1	0.032[a]	E(level): See also E_x(keV)=3070 *30* (Bu51), 3055 *12* (1954Sp01), 3055 *4* (1957Br82).
3842.76 *42*	7/2$^-$	<8 keV	3	0.028[a]	E(level): See E_x(keV)=3870 *40* (Bu51), 3840 *12* (1954Sp01), 3846 *5* (1957Br82)/. S: See als <0.1 (1970Da14).
4553.8 *16*	3/2$^-$	40 keV *5*	1	0.23	E(level): See also E_x(keV)=4590 *20* (Bu51), 4553 *5* (1957Br82). S: using HD parameters; 0.20: using MB parameters (1973Da17).
5084.4 *9*	3/2$^+$	95 keV *5*	2	1.25	E(level): See also E_x(keV)=5060 *20* (Bu51), 5083 *10* (1957Br82). Γ: See also Γ(keV)=67 (1970Vi03), ≈70 (1974Co04: average value), Γ_n=97 keV *5* (1979An15). S: average value: using HD parameters (1973Da17).
5215.77 *45*		<8 keV			E(level): See also E_x=5215 keV *5* (1957Br82).
5379.2 *14*	3/2$^-$	28 keV *7*			E(level): See also E_x(keV)=5310 *20* (Bu51), 5378 *7* (1957Br82)/.
5697.26 *33*	7/2$^-$	<8 keV	3	≈0.15	E(level): See also E_x=5695 keV *5* (1957Br82). S: using HD parameters (1973Da17).
5732.79 *52*		<8 keV			E(level): See also E_x(keV)=5790 *20* (Bu51), 5731 *5* (1957Br82).
5869.07 *55*		<8 keV			E(level): See also E_x=5866 keV *5* (1957Br82).
5940[‡] *15*		23 keV *10*			
6260[#] *30*					
6850[#] *40*					
7530[#] *50*					

[†] From (1990Pi05: Q_0=1918.737 keV *62* was used) except where noted.
[‡] From (1957Br82) except where noted. In (1957Br82) the resolution is ≈8 keV.
[#] From (Bu51).
[@] See (1956Gr37,1961Ke02,1963Ya03,1964Sc12).
[&] Average value from (1970Da14,1972Co15,1974Co04).
[a] Average value, calcualted using data from (1961Ke01,1964Sc12); see discussion in (1970Da14).

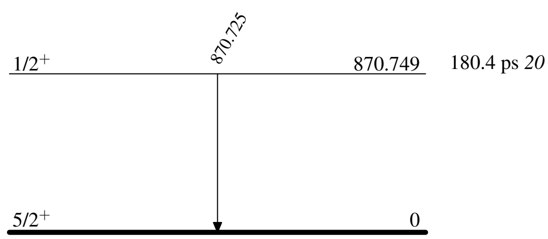
^{16}O(d,p),(d,pγ) 1990Pi05,1957Br82 (continued)

$\gamma(^{17}O)$

E_γ	E_i(level)	J^π_i	E_f	J^π_f	Comments
870.725 *20*	870.749	1/2$^+$	0	5/2$^+$	See E_γ(keV)=870.5 *20* (1952Th24: The internal conversion coefficient is consistent with E2), 869 *3* (1955Ma36), 870.81 *22* (1966Wi01), 870.7 (2000El08,2006Sz07), 870.725 *20* (1980Wa24). See also (1995Ro28,2016Cs02).

^{16}O(d,p),(d,pγ) 1990Pi05,1957Br82

Level Scheme



$^{17}_{8}O_{9}$